

Notice of Allowability

Application No.

10/063,211

Applicant(s)

VORA ET AL.

Examiner

Thomas H. Parsons

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed 29 September 2004.
2. ☒ The allowed claim(s) is/are 1-24.
3. ☒ The drawings filed on 29 September 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Response to Amendment

This is in response to the Amendment filed 29 September 2004.

Specification

1. The objection to the disclosure because minor informalities has been **withdrawn** in view of Applicants' Amendment.

Drawings

2. The objection to the drawings has been **withdrawn** in view of Applicants' Amendment.

Claim Rejections - 35 USC § 103

3. The rejections of claims 1-6 and 13-18 under 35 U.S.C. 103(a) as being unpatentable over Draper et al. (5,273,838) in view of Nishioka et al. (5,543,241) have been **withdrawn**.

Claim Rejections - 35 USC § 103

4. The rejections of claims 1-6 and 13-18 under 35 U.S.C. 103(a) as being unpatentable over Draper et al. (5,273,838) in view of Nishioka et al. (5,543,241) have been **withdrawn**.

Allowable Subject Matter

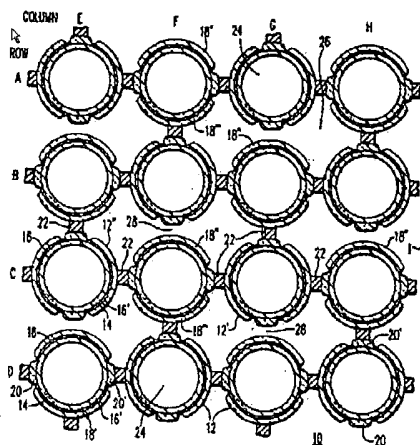
5. Claims 1-24 are allowable over the prior art of record.

REASONS FOR ALLOWANCE

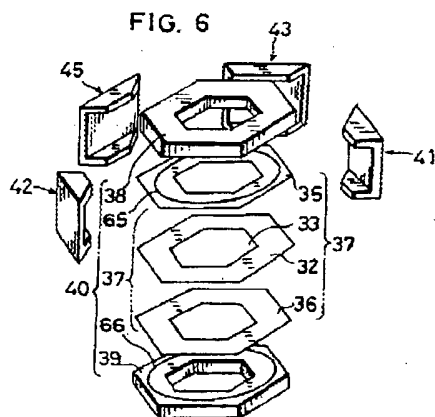
5. The following is an examiner's statement of reasons for allowance:

Art Unit: 1745

Draper et al. as shown in the Figure below disclose a fuel cell comprising a cathode layer (14) having a tubular shape; a contact layer (interconnection 20) electrically coupled to and disposed on the cathode layer to leave an uncovered (discontinuous) cathode surface portion; an electrolyte layer (16) disposed on the uncovered cathode surface portion; and an anode layer (18) electrically isolated from contact layer.



Nishioka et al. as shown in the Figure below disclose a polygon fuel cell comprising an anode (33) formed on one surface of a hexagonal electrolyte plate (32) and a cathode (not shown in drawing) formed on the other side of the electrolyte plate wherein the anode and cathode are also hexagons.



Art Unit: 1745

The combination of references (i.e. substituting the anode layer of Draper et al. with the anode of Nishioka et al.) would not lead one skilled in the art to a polygonal fuel cell wherein the anode layer is disposed on the electrolyte layer such that the fuel cell has a polygonal cross section wherein the polygonal cross sections. Further, one of ordinary skill in the art would not be motivated to modify the teachings of a discontinuous anode layer on a tubular electrolyte with the teachings of an anode on a flat electrolyte plate.

Nor would one of ordinary skill in the art be motivated to modify the discontinuous anode electrode layers of Draper et al. with the continuous anode surfaces of Nishioka et al. to provide a fuel cell having a polygonal cross section.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas H. Parsons whose telephone number is (571) 272-1290. The examiner can normally be reached on M-F (7:00-4:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1745

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas H Parsons
Examiner
Art Unit 1745


PATRICK Ryan
SPE-A01748